Transform Aerospace and Defense with SAP® Solutions
Business Value with Intelligent ERP
The Need for an Intelligent Enterprise

Leading A&D companies use market dynamics to create and capture new business opportunities
Aerospace and defense (A&D) companies have always been at the leading edge of technology innovation. Consequently, ideas such as “smart” aircraft and factories are nothing new to the industry. The objectives of these innovations focus on the effective management of finite resources and the ability to provide more for less. Meeting these objectives at a faster pace while facing less risk is dependent upon an enterprise-wide business process platform that acts as a semantic layer providing insights into all data sources – the digital core. But how does a digital core with a single source of truth help drive innovation?

Respond to rapid changes
Operational excellence is core to A&D, and it requires companies to be agile in their response to continuous change within the industry. Empowering decision-makers by breaking down silos and providing insights optimized across the value chain is critical to addressing rapid changes. The digital core provides the foundation to enrich process information with operational data, using the Internet of Things (IoT) and other innovative technologies, which enables real-time decision-making and strategic differentiation.

Harvest the power of the network
Digitalized supply chains provide new insights that address issues early on. This reduces costs while increasing customer satisfaction. Supply chains and logistic operations become better-connected, dynamic, multitier production and sustainment networks that foster cross-domain and partner collaboration. This enables technologies such as blockchain that support secured data exchange. Synchronize and collaborate within the digital ecosystem to optimize products over their entire lifecycle while improving the customer experience.

Develop new revenue streams
Massive amounts of data are generated every day by modern machines and digitalized products. It is critical for A&D businesses to capitalize on this data to enable smarter factories and to create the platform needed to develop differentiated service offerings. The ability to capture and correlate data across different sources allows monetization of the data and optimized product lifecycle costs.

Manage innovative opportunities
As the speed of innovation increases, the alignment of business objectives with financial targets during introduction becomes more crucial. A company's pace of innovation and future success will be determined by whether it has the flexible foundation to effectively manage these two pieces across the entire enterprise and life stages of its product. Additionally, as new business models, such as “information as a product,” become more prevalent, the need for a semantic layer across all enterprise systems will grow. Players with a strong technology background will be able to challenge the barriers to market entry.

The Intelligent Enterprise
Bringing SAP S/4HANA® and SAP® Leonardo technologies together as a digital core will result in a more flexible and intelligent enterprise. To achieve next-generation business processes, companies need an intelligent ERP solution that can be continuously enhanced and extended with innovative business services and applications built on emerging technologies, including machine learning, blockchain, and the IoT. A&D organizations that have big innovation appetites or prefer to be early adopters have already begun this journey.
Strategic Priorities in a Digital Economy

The digital economy is disruptive. A&D companies need strategic priorities that drive transformation. SAP envisions reimagined end-to-end (E2E) business scenarios to support the strategic priorities of the digital economy.

**Customer centricity**
Putting the customer’s point of view at the center of every decision is vital for success in the digital age. This does not stop with business development or product design, but it also applies to how products are built and what services are offered. Digital services must provide tailored benefits, improve product performance, and support outcome-oriented service models to reduce cost and risk.

*E2E scenario: The new art of customer-oriented after-sales engagement* – Rethinking the entire business from the customer’s perspective

**Digital business networks**
Designing network value streams, which enable collaboration, benefits all business partners while leveraging the knowledge of the best-of-breed partners. Scalable and secure, many-to-many networks can distribute critical business information across the network, automate real-time network-level analytics, and enable secure, streamlined collaboration across departments and companies.

*E2E scenario: Integrated demand and supply planning* – Transforming your traditional linear supply chain into a responsive, digital supply network

**Driving innovation**
Continuous innovation is impacting A&D products and processes alike. With even more technology embedded, OEMs aim to make products smarter, more reliable, and affordable for customers. Process automation benefits from greater IoT integration, while 3D printing is further adopted across the industry.

*E2E scenario: Efficient delivery of highly customized products* – Faster design and collaboration process for smart product offerings

**Agile manufacturing**
Smart, connected factories with advanced automation and integration of shop-floor processes deliver granular data for optimizing products and processes and improving compliance. Production and supply chain processes gain flexibility and accelerate reactions to changes in demand, supply, and resources, driving optimization in virtual capacity and operational efficiency.

*E2E scenario: Engineering-driven production* – Efficient manufacturing engineering and operational excellence by managing and controlling manufacturing changes and shop-floor operations

**New business models**
New business models are disrupting traditional business models, creating new markets, and generating new revenue streams by delivering outcomes. They utilize data as a product, for example, for new after-sales services.

*E2E scenario: Performance-based contracting* – Increasing asset performance and profitability of outcome-based service contracts efficiently
Reimagine the New Art of Customer-Oriented Aftermarket Engagement

SAP solutions for a full digital representation of customer assets along their lifecycle deliver an embedded, collaborative, and real-time set of next-generation processes and systems for a customer-oriented, omnichannel, profitable, and predictive service business.

Traditional scenario

- Untrustworthy and disparate asset information
- Limited capability to monitor asset condition and to predict assets health, remaining lifetime, and demand forecast
- Missing end-to-end transparency and multiple sources for parts catalogs
- Distributed multiple data sources and communication channels for all parties involved, making business complex and not transparent
- Longer service request resolution process based on outdated or incomplete information
- No platform to connect all parties involved

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- Leverage a digital twin for granular, real-time asset information in the context of service delivery, such as service parts and bulletins over the whole lifecycle
- Monitor equipment health condition based on sensor data with graphical visualization of warning and error zones
- Provide a superior customer experience across different channels through simplified service parts selection using a 3D viewer and a harmonized pricing and service offering from quote to cash
- Streamline service parts business through efficient spare parts commerce platforms, digitally connecting all parties involved with full process transparency
- Simplify information flow based on access to service knowledge databases and machine learning capabilities to solve service requests automatically
- Connect multiple business partners for inter- and intra-company information exchange and collaborative service processes

Top value drivers

- **10%–20%** increase in revenue from new products*
- **10%–20%** Increase in customer satisfaction*
- **15%** increase in market agility/responsiveness*

*Benefits are based on results from early adopters of SAP S/4HANA or are conservative outside-in estimates of the benefits of moving from a traditional ERP system to enhanced SAP S/4HANA with line-of-business and cloud capabilities. As each enterprise is at a different level of maturity, our recommendation is that you work with SAP to determine the value proposition for your enterprise.
Reimagine Integrated Demand and Supply Planning

With SAP S/4HANA at their digital core and using the SAP Integrated Business Planning solution for strategic planning and SAP Ariba® Strategic Sourcing Suite, A&D companies can define their business objectives and make the tactical and operational decisions to set the demand plan, capacities, and inventory targets.

Traditional scenario

Alignment between sales plan and capacity plan excluding inventory targets
Unable to combine all forecast demands from sales, marketing, production, and after-sales
Limited capabilities to share forecasting plans with suppliers, and no visibility into availability of supply digitally
Propagation of supply requirements through company’s network, with limited consideration of business priorities and no connection to fulfillment planning
Late and inconsistent visibility of shipments and deliveries from suppliers, making it difficult to react to delays
Use of e-mails, phone calls, and spreadsheets to resolve issues when there is a supply disruption or a demand change to determine how to respond

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Create the optimal business plan to drive revenue growth and increase market share
Align holistically to the business plan, including financials and inventory target setting, supported by internal collaboration
Allow a consolidated demand plan across all streams, including spare-parts forecasts, customer options, and a long-term production plan
For effective orchestration of distributed supply chains, develop collaborative business processes (forecast exchange and supplier-managed inventory) with strategic suppliers to detect bottlenecks and risks early
Base finite planning on optimization or business priority rules, enabling more robust plans by considering internal and external capacities – both rough cut and detailed
Share purchase order updates electronically with suppliers and receive confirmations in real time to increase transparency on critical exceptions for production planning
Gain full visibility into demand and supply across the extended network to be able to simulate changes to plans, with root-cause analysis to understand and resolve issues

Top value drivers

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<tr>
<th>Top value drivers</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>5%–7%</strong></td>
<td>Reduction of total landed costs*</td>
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<tr>
<td><strong>8%–10%</strong></td>
<td>Reduction of revenue loss due to stock-outs*</td>
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<tr>
<td><strong>10%–12%</strong></td>
<td>Reduction of days in inventory*</td>
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<tr>
<td><strong>10%</strong></td>
<td>Reduction of manufacturing cycle time*</td>
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Reimagine Efficient Delivery of Highly Customized Products

With SAP S/4HANA at their digital core and using the SAP S/4HANA Cloud solution for intelligent product design, A&D companies can provide their customers with individualized products faster and at a lower cost.

Traditional scenario

Time-intensive process for customers to configure their products based on standard configuration options and adding additional options
Lack of holistic view on project costs and status of a customer-specific order
Challenging to collaborate with OEMs and partners on customer demand digitally
Unable to calculate preliminary cost and profitability
Unable to collaborate with manufacturing service providers for 3D printing parts
Unable to offer and manage software and entitlements

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Gain customer-oriented configure, price, quote (CPQ) capabilities, allowing customers to build their own product with specific add-ons
Achieve intelligent product configuration based on historical data
Use integrated project and program management to allow actual cost, earned value, and project status tracking in real time
Take advantage of collaborative design of additional requirements on one platform for customers, OEMs, and partners
Use early product costing to enable engineering and sales to design for profitability, better estimating costs at early lifecycle phases
Harness 3D printing for design optimization using a collaboration platform between OEMs and service providers, supporting exchange on design documents, quality, and pricing
Leverage embedded software management capabilities enhanced by constraints management of hardware and software components as part of the SAP S/4HANA architecture

Top value drivers

15% increase in market agility and responsiveness *
10% reduction of total manufacturing cost*
10%–20% increase in revenue from new products*
10%–20% increase in customer satisfaction*

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Reimagine Engineering-Driven Production

The digital core based on SAP S/4HANA and digital manufacturing solutions from SAP enable A&D companies to bridge the gap between engineering and manufacturing by providing a single source of truth for manufacturing master data. They can react faster to engineering changes and manage and control manufacturing and shop-floor operations in order to realize Industry 4.0.

Traditional scenario

Complex collaboration
defining product structure and master data

Creation of production plan

Separate systems for finite and infinite material planning, requiring more effort to find the best resolution option

List of scheduled planned orders for release

Engineering changes

No single view and a huge manual effort to identify impacted orders and adopt changes

No supervisor cockpit to identify critical orders; huge effort to resolve conflicts

No system support to predict quality issues during production or apply predictive maintenance

No system support to view, analyze, and monitor plant performance

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Hand over bills of material and creation of work instructions from engineering to manufacturing in one integrated process or system

Create production plan

Use live MRP considering finite and infinite planning that enables insight to action in real time in one consistent cockpit supported by simulation capabilities

Gain change impact analysis to identify all objects potentially impacted by change and take action

Leverage alerts-driven production orchestration with contextual information, such as missing parts, for root-cause analysis and decision support

Analyze and correlate IoT and production data related to labor, machine, and material for near-real-time prediction of product quality or machine health

Achieve operational excellence by enabling data-driven performance management within and across plants supporting standard KPIs (such as overall equipment effectiveness)

Top value drivers

15% increase in market agility and responsiveness*

10% reduction of change management costs*

10%–20% increase in on-time delivery*

Up to 10% reduction of total manufacturing costs*

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Reimagine Profitable, Performance-Based Contracting

The SAP Digital Asset Management solution by OpenText provides real-time health information of assets based on critical values and trends, thus allowing the most efficient asset maintenance strategies for optimization of cost and risks and improved performance.

Traditional scenario

- No real-time and holistic view of asset performance
- Limited opportunities to optimize maintenance cost, risk, and performance and act more proactively
- Risk of failure with customer

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- Dynamic maintenance management across all resources
- Contract analytics to analyze granular performance and costs and more effectively manage performance contracts
- Monitoring, scoring, and prediction of asset health based on machine learning algorithms
- Optimizing return on assets across lifecycles by monitoring, reviewing, and improving maintenance activities

Top value drivers

<table>
<thead>
<tr>
<th>Increase</th>
<th>Increase</th>
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<tbody>
<tr>
<td>of return on assets and optimized asset performance*</td>
<td>of asset performance and reduce maintenance cycle times*</td>
</tr>
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</table>

Top value drivers

| 3%–10% improvement of service profit margin* |

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Deep Dives Along the Aerospace and Defense Value Chain

Here are the primary capabilities where value can be achieved through the digital core based on SAP S/4HANA, cloud-based line-of-business (LoB) solutions, and SAP Leonardo technologies.
Business Capture and Program Delivery

<table>
<thead>
<tr>
<th>Typical challenges</th>
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<tr>
<td>• Inability to prioritize project portfolio and decisions in alignment program with customer and strategy</td>
<td>• Distributed program data, analytics only in external data warehouse, batch jobs for complex process, no real-time view on project status and risks</td>
<td>• Live tracking of financial project KPIs and progress analysis by leveraging in-memory technology</td>
<td>• Aggregation and visualization of portfolio and program performance using cloud analytics for stakeholders and decision-makers</td>
</tr>
<tr>
<td>• Inability to control program performance based on real-time status across finance and logistics</td>
<td>• Microsoft Excel–based and manual program planning often disconnected from finance and HR</td>
<td>• Program resource planning and structuring with integration into HR, finance, and project execution</td>
<td>• Machine learning used to predict project costs based on historical project data</td>
</tr>
<tr>
<td>• Lack of visibility into project resource demands and allocation, causing project delays and underutilization</td>
<td>• Monitoring order-to-cash process performance that requires a separate business intelligence system and replication of operational data</td>
<td>• Estimation of financial and capacity demand for projects and alignment with corporate strategy</td>
<td>• SAP Sales Cloud solution providing transparency into customer data</td>
</tr>
<tr>
<td>• Late discovery of project risk, cost, and schedule deviations – difficult risk management</td>
<td>• Traditional ERP systems supporting simple ATP capabilities and requiring an additional global ATP solution for comprehensive ATP capabilities</td>
<td>• Sales-order fulfillment cockpit providing a prioritized list of outstanding sales orders based on real-time information</td>
<td>• SAP Commerce Cloud solution providing consumer-grade customer experience with one-stop-shop capabilities</td>
</tr>
<tr>
<td>• Lack of visibility into the order management process, causing slow resolution and risk of delayed deliveries</td>
<td>• Difficulties monitoring order-to-cash process performance</td>
<td>• Embedded order-to-cash process performance monitor providing predefined performance KPIs based on real-time transactional data</td>
<td>• SAP Marketing Cloud solution enabling event-driven, contextual, and relevant customer messaging</td>
</tr>
<tr>
<td>• Difficulties monitoring order-to-cash process performance</td>
<td></td>
<td>• Comprehensive ATP capabilities</td>
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</table>
## Design and Build Complex Products – Design

### Typical challenges

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<tr>
<td>Lack of transparency into project resource demands and allocation, leading to project delays as well as low resource utilization</td>
<td>Product-related documents that are managed and linked to ERP master data throughout the entire process</td>
<td>Efficient definition, structuring, and management of customer requirements in a requirement-driven product development environment with SAP S/4HANA Cloud for intelligent product design</td>
</tr>
<tr>
<td>Inability to plan and manage engineering change, leading to high downstream costs</td>
<td>Ability to release engineering changes for a unique lot number and release date</td>
<td>Increased profitability from executing engineering changes with knowledge of downstream costs</td>
</tr>
<tr>
<td>Lack of a complete, integrated view of cyberphysical products (including smart product aspects)</td>
<td>Integration of mechanical and electrical disciplines in the end-to-end design process</td>
<td>Real-time transparency with enhanced, context-sensitive analytics</td>
</tr>
<tr>
<td>Loss of information along the end-to-end process, making it challenging to enable seamless manufacturing and service</td>
<td>Bill of materials (BOM) and routing management</td>
<td>Enhanced CAD integration with market-leading authoring tools to support cross-discipline product definition</td>
</tr>
<tr>
<td>Inability to manage early product cost structures</td>
<td>Visual handover to manufacturing supporting the BOM, routing, and visual work instructions</td>
<td>Management of embedded software versions</td>
</tr>
<tr>
<td>Lack of access to all compliance obligations</td>
<td>Manual effort to do simple costing estimates</td>
<td>Ability to maintain multiple BOMs in an intuitive user interface also supporting visual product design</td>
</tr>
<tr>
<td>Inability to connect with suppliers for collaborative engineering</td>
<td>Product safety and stewardship solutions that automate compliance determination and embed compliance metrics in the R&amp;D environment</td>
<td>Real-time product compliance processes and analytics embedded into core business processes</td>
</tr>
<tr>
<td>No insights on current product usage to improve product design</td>
<td></td>
<td>Strategic sourcing and collaboration during the design phase</td>
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</tbody>
</table>

### Business benefits

- Accelerated product development across the extended enterprise
- Increased revenue from new products and services
- Reduced engineering change cost
- Faster time to market
- Reduced compliance management costs
- Ability to meet target costs matched to real customer needs
- Faster supplier onboarding
- Reduced supplier risk
## Design and Build Complex Products – Build

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<tr>
<td>Inefficient or ad hoc handover of BOM information and design changes from engineering to manufacturing</td>
<td>Visual manufacturing planner for leveraging 3D CAD information, thereby simplifying the handover process</td>
<td>Streamlined manufacturing engineering user experience to create manufacturing-relevant master data and handle handover to manufacturing</td>
<td>Demand-driven planning integrated with SAP Integrated Business Planning</td>
</tr>
<tr>
<td>Inability to efficiently and consistently handle engineering or manufacturing-driven changes on manufacturing master data and production orders</td>
<td>Shop-floor workers able to go to the central terminal to make required entries</td>
<td>Comprehensive change impact analysis that extends to the shop floor, with the possibility to hold production orders</td>
<td>One network channel for the electronic handover of technical data for production assets across OEMs, service providers, and procurement vendors</td>
</tr>
<tr>
<td>Inefficient application proximity to shop-floor workers for making entries, resulting in delays and errors</td>
<td>SAP Business Suite software providing an integrated solution from enterprise planning to shop-floor execution</td>
<td>Mobile apps for production supervisor and production operator</td>
<td>Extending SAP S/4HANA to connect to shop-floor equipment and IoT devices, improving predictive quality</td>
</tr>
<tr>
<td>Complex and expensive system landscapes with multiple shop-floor systems in distributed plants, resulting in high total cost of ownership (TCO)</td>
<td>Manual process to go into the list of production orders and run multiple reports</td>
<td>Real-time alerts based on bottlenecks in production, such as schedule or component delay</td>
<td>Managing the product lifecycle as a “digital twin” from “as designed” into “as built” to “as maintained” in SAP Asset Intelligence Network</td>
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<tr>
<td></td>
<td>Manufacturing insights available with support from the IT department using analytical tools</td>
<td>Constraint-based planning (capacity and resource) using various heuristics and optimizers to generate a precise production plan by bringing production planning and detailed scheduling on SAP S/4HANA</td>
<td>Manufacturing performance KPIs from the SAP Digital Manufacturing Insights solution to support tactical and strategic decisions</td>
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<td></td>
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<td></td>
<td>SAP Distributed Manufacturing application connecting with additive manufacturing service providers</td>
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### Business benefits

- Reduction in unnecessary costs through enhanced engineering change management
- Reduced manufacturing production costs by reducing scrap
- Reduced manufacturing direct labor costs
- Simplified IT landscape and lower TCO
## Responsive Supply Networks

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<tr>
<td>Difficulty in driving sales and operations (S&amp;OP) planning with transactional ERP systems, leading to slow, manual planning with inconsistent information across silos</td>
<td>• Collaboration in S&amp;OP planning requiring separate integration; scenario analysis difficult across silos</td>
<td>• Accelerated MRP: improved effectiveness of planning, up to 10x faster, enabling more frequent MRP runs for better planning accuracy</td>
<td>• Collaborative S&amp;OP, including what-if analysis and simulations of different planning to align objectives from finance, sales, marketing, and the supply chain (SAP Integrated Business Planning)</td>
</tr>
<tr>
<td>Long batch-run processes leading to inefficient planning</td>
<td>• Planning runs at predefined times without real-time data</td>
<td>• One single, harmonized MRP process for both unconstrained and critical materials that require constraint-based planning</td>
<td>• Supply planning beyond MRP in conjunction with S&amp;OP to provide unconstrained or constrained (optimized) supply plans (SAP Integrated Business Planning)</td>
</tr>
<tr>
<td>Manual resolution on material bottlenecks, and lack of simulation and optimization tools</td>
<td>• MRP lists working with snapshots of the planning situation</td>
<td>• Real-time inventory with a simplified data model allowing a higher inventory throughput and flexible, granular analytics</td>
<td>• Supply chain control towers to provide end-to-end supply chain visibility (SAP Integrated Business Planning)</td>
</tr>
<tr>
<td>Inability to include real-time demand or supply changes, which leads to outdated plans</td>
<td>• No one MRP run covering finite and infinite planning</td>
<td>• Reduced safety buffers and missing parts</td>
<td>• Business network to provide direct material sourcing, collaboration, and supplier risk management capabilities for strategic suppliers (SAP Ariba solutions)</td>
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<tr>
<td>No real-time inventory transparency</td>
<td>• Separate system for sophisticated ATP requirements, such as global ATP</td>
<td>• Embedded, modernized ATP framework</td>
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<tr>
<td>Difficulty of integrating suppliers into planning and fulfillment processes</td>
<td>• Separate systems for warehouse management and transportation management</td>
<td>• Advanced warehouse and transportation management capabilities natively integrated</td>
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<tr>
<td>No integrated planning and logistics processes considering rough-cut and detailed capacities, causing too many exceptions</td>
<td>• No system support on problem resolution, and no integrated simulation capabilities</td>
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<td></td>
<td>• Inventory updates not available in real time</td>
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<td></td>
<td>• Limited digital connectivity to suppliers</td>
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<tr>
<td>• Reduced overall supply chain planning cost</td>
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<td>• Reduced sales and operations planning cycle time</td>
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<td>• Reduced revenue loss due to stock-outs</td>
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<td>• Improved manufacturing function planning efficiency</td>
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<td>• Reduced inventory and cost of goods sold</td>
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<td>• Improved inventory process efficiency</td>
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<td>• Faster supplier onboarding</td>
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<td>• Reduced supplier collaboration cost</td>
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# Aftermarket Service

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<td>• Inefficient service master data and agreements and end-to-end maintenance, repair, and overhaul (MRO) management</td>
<td>• Service capabilities focused on reactive service, with no support for proactive selling of services</td>
<td>• E2E MRO from engineering to execution on the same platform as finance and logistics</td>
<td>• SAP C/4HANA suite – Offering front-office SAP Service Cloud solutions for use in aftermarket service, tightly integrated with SAP S/4HANA</td>
</tr>
<tr>
<td>• Poor integration between the back office and front office, causing disconnected service processes</td>
<td>• No E2E visibility from the customer omnichannel front office into service execution in the back office</td>
<td>• Completely renewed service back-office capabilities that help service employees to better serve their customers</td>
<td>• Optimized omnichannel support and field service execution, including mobile apps for field service technicians</td>
</tr>
<tr>
<td>• Inefficient service parts warehousing and fulfillment processes, resulting in poor service levels and high inventory</td>
<td>• No comprehensive visibility into contract profitability and service and asset KPIs</td>
<td>• Lean service processes across back-office capabilities, integrated with front-office solutions</td>
<td>• SAP Service Ticket Intelligence application using machine learning to automate and optimize service ticket processing</td>
</tr>
<tr>
<td>• Inability to support new business models such as performance-based services</td>
<td>• Limited inventory analysis and transparency; integration to additional systems required for advanced warehouse management</td>
<td>• Optimized inventory management with improved live transparency</td>
<td>• SAP Asset Intelligence Network enabling asset OEMs to collaboratively manage the digital twin of assets</td>
</tr>
<tr>
<td>• Difficulty in leveraging equipment IoT data to enable dynamic maintenance strategies and increase asset performance</td>
<td>• Running new business models only possible with high manual effort and integration of external solutions</td>
<td>• New SAP Fiori® apps to help inventory managers and warehouse clerks</td>
<td>• SAP Leonardo IoT capabilities and the SAP Predictive Maintenance and Service solution enabling companies to leverage the IoT to optimize their service and maintenance processes</td>
</tr>
<tr>
<td>• Limited mobile support for field technicians</td>
<td>• No complete view on asset details for all stakeholders involved in the service process and MRO</td>
<td>• Embedded extended warehouse management for service parts warehousing</td>
<td>• Better end-to-end support for performance-based services – from business model design through contract management, usage tracking, and billing</td>
</tr>
</tbody>
</table>

## Business benefits

• Service as a driver for revenue and profitability
• Higher customer satisfaction
• Increased asset uptime
• Reduced MRO cost
• Increased revenues from the service parts business
• Improved service-level compliance
• Improved accuracy in services invoicing
• Reduced warehousing effort and cost
• Ability to gain competitive advantage and respond to customer needs for new consumption models
• Efficient operational execution of new business models
SAP Strategy – Deliver the Intelligent Enterprise

Intelligent ERP is the digital core of an intelligent enterprise.

An intelligent enterprise can be continuously enhanced and extended with business services and applications built on a digital platform to create transformative business value.

Aerospace and defense organizations that have big innovation appetites or prefer to be early adopters have already begun this journey.
SAP for Aerospace & Defense Solutions

An E2E intelligent enterprise for aerospace and defense

The SAP S/4HANA Enterprise Management solution provides the core for successfully running an A&D business along the entire product lifecycle. In an intelligent enterprise, employees must be able to focus on higher-value outcomes and invent new business models and revenue streams. By applying intelligent technologies such as the IoT, artificial intelligence, machine learning, and advanced analytics, manufacturers can transform into event-driven businesses.
SAP’s Value Proposition for Aerospace and Defense Companies

SAP S/4HANA provides A&D companies with a proven framework to adopt industry best practices while attaining operational excellence across the full value chain.

**Strategy enablement**
- Reduced complexity through simplified and more efficient and adaptable core processes
- Agile, faster, and more data-driven operations
- Accelerated creation of new business models
- Accelerated mergers and acquisitions synergy and on-the-fly reorganizations
- Optimization across a value chain through a 360-degree view of the enterprise
- Comprehensive platform for digital transformation road maps

**Empowered employees**
- Actionable insights on unified, real-time data and built-in system suggestions driving better decision-making
- Empowered users through role-driven, user-centric processes and self-service business intelligence
- Accountability through real-time KPIs
- Optimized exception processing through system-based work prioritization
- Increased productivity and user adoption with a new, intuitive SAP Fiori user experience on all devices

**Business benefits**
- 10%–15% reduction in order fulfillment lead time
- Up to 15% reduction in revenue loss due to stock-outs
- 25%–30% reduction in inventory levels
- Up to 10% reduction in total manufacturing costs
- 10%–20% increase in on-time delivery
- Up to 10% increase in project manager productivity
- 10%–20% higher customer satisfaction
- 20%–30% reduction in R&D cost

**IT benefits and TCO**
- Lower TCO by reduced landscape complexity and data footprint, or consolidated LoB or industry
- Merged OLAP and OLTP
- Standardized systems and processes
- Connectivity to business partners, the workforce, and the IoT
- Central, scalable platform that can grow with needs

*Benefits are based on results from early adopters of SAP S/4HANA or are conservative outside-in estimates of the benefits of moving from a traditional ERP system to enhanced SAP S/4HANA with LoB and cloud capabilities. As each enterprise is at a different level of maturity, our recommendation is that you work with SAP to determine the value proposition for your enterprise.
Customers Are Achieving Value from SAP Solutions

Newport News Shipbuilding

Industry
Aerospace and defense

SAP solution
SAP S/4HANA

Customer Web site
nns.huntingtoningalls.com

Click here to watch video.

As the U.S. Navy relies on Newport News Shipbuilding (NNS) for all of its nuclear-powered aircraft carriers, Newport News relies on SAP software to create 3D models and instructions for shipbuilders, reducing time required for plan certifications from months to weeks. NNS’s mission is to optimize its workforce experience and streamline production processes by introducing mobile access to step-by-step instructions, including 3D visualizations.

“We want to achieve radical change. This kind of transformation cannot be done without partners. So we are working with SAP to accelerate our digital transformation.”

Bharat Amin, Vice President and CIO, Newport News Shipbuilding

Airbus Defense and Space

Industry
Aerospace and defense

SAP solution
SAP S/4HANA

Customer Web site
www.hensoldt.net/solutions/land/optronics

Click here to read the business transformation study

Airbus DS Optronics needs real-time visibility into company data. But it was hindered by slow, manual methods, which meant financial reporting could take as long as three days. SAP S/4HANA accelerates reporting and digitalizes finance processes. Sales forecasts, key metrics, and project cashflows are available instantly, facilitating more efficient decision-making and planning. This also gives controllers more time to support management in strategic work. Financial closing processes are now three to four times faster.

“In our industry, information that is two days old is simply outdated – real-time reporting is the name of the game. SAP S/4HANA gives us the possibility to do this. Now, all information, including key figures and sales forecasts, is available at the touch of a button, enabling our controllers to present live data in management meetings.”

Jochen Scheuerer, Director of Information Technology, Airbus DS Optronics GmbH